

HEAVY DUTY FANS

CUSTOMER DRIVEN

Chicago Blower Corporation (CBC) takes great pride in designing and manufacturing the most dependable pre-engineered and custom fans that meet the exact performance and dimensional requirements of your application. Our broad capabilities and customer focused team allow us to always provide you with a premium quality product with optimum performance, that fits your specific needs.

We offer a wide variety of arrangements and types of Custom Heavy Duty fans, that are recognized worldwide for their high efficiency, maximum economy, and reliability over a wide variety of industries and applications. Through our strict quality and testing programs, and on-going inspection of our fans, you can be sure we monitor your fan every step of the way and will deliver you a fan that exceeds your expectations.



Resources

Chicago Blower Fan App

Engineering calculations at your finger tips. Get it on Google Play or download on the App Store

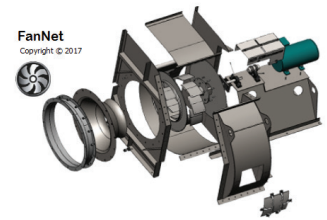


FanNet

Refer to Chicago's FanNet for performance, fan curves and sound data. For software and assistance visit chicagoblower.com



FanNet
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Why CBC?

- ISO 9001 Certified, Proudly Made in the USA
- All Welders AWS Certified
- AutoCAD & Solid Works Drawings Available in 2D & 3D
- Axial/Centrifugal/Pressure Blowers Available in a Range of Sizes
- 5000 CFM to 1,000,000 CFM and Pressures up to 108" SP wg on a Single Fan/Blower
- Sizes to 150" Diameter (Over 30 ft Tall Fan) or Motors to 4,000HP
- Materials of Construction: 304/316/347 SS, Aluminum, Hastelloy, Ferralium, etc.
- API & Customer Specifications Met
- Testing: AMCA Performance Testing, FEA Analysis, Cycle Testing, NDE, Ultrasonic, Stress Relief All Available, AMCA Accredited Laboratory
- Start Up Commissioning & Installation Available
- Aux Equipment: Silencers, Dampers, Air Preheaters, Vibration Bases, Actuators, Evase, Transition Pieces, Rainhoods, Motors, etc.
- Monitoring: Vibration Probes/Monitor, Temperature Sensor Probes, Speed Monitor (Pulsar Wraps, Tach Holes) etc.
- Bearings: Grease, Oil Mist, Static & Circulating Oil, Air Cooling & Other Lubricating Options
- Fan Modifications: Spark Resistant Construction, Blade & Housing Liners, Dimensional Matching, Dual Drive Units, Turbine Drive, etc.
- No Fan Too Special or Too Difficult & Will Always Exceed Our Customer's Needs

INDUSTRIES & APPLICATIONS SERVED

Industries

- Aerospace
- Agriculture
- Air Pollution Control
- Asphalt
- Automotive
- Car Wash
- Cement
- Chemical Processing
- Clean Rooms
- Coal
- Dust Collection
- Ethanol
- Fertilization
- Food & Beverage
- Foundry
- Glass
- Manufacturing Facilities
- Marine
- Metals & Minerals
- Mining
- Nuclear
- Paper & Pulp Production
- Petrochemical
- Pharmaceutical
- Power Generation
- Printing
- Recycling
- Steel Fabrication
- Textile
- Transportation
- Tunnel Ventilation
- Water Treatment

Applications

- Aeration
- Air Slides
- Air Strippers
- Blow Off
- Boiler Systems
- Burner Systems
- Cement Plants
- Clunker Cooler
- Coal Processing
- Computer System Exhaust
- Containment
- Drying
- Dust Collection
- Emission Control Systems
- Fluidized Bed Systems
- Forced Draft
- Fume Exhaust
- General Ventilation
- Induced Draft
- Industrial Ovens
- Lab Hood Exhaust
- Material Handling
- Odor Control
- Oil Mist
- Oxidizers
- Parking Garage Exhaust
- Pickling
- Pneumatic Conveying
- Pollution Control
- Process Cooling
- Process Heating
- Scrubbers
- Snow Making
- Spray Booth Exhaust
- Tempering
- Vacuum Systems
- Wave Pools
- Wind Tunnels



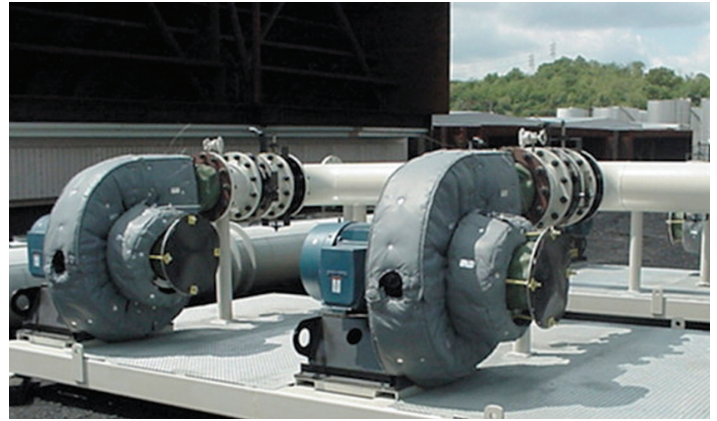
These two Design 5500 Forced Draft Fans are size 7678, Backward Curved w/Flue Gas Recirculation and are designed to handle 115,753 ACFM & 49" w/g for a Boiler application in Thailand.



This Design 1911 AF Wheel Size 4900 Arrangement 4 with IVD, AMCA Spark Resistant Construction "Type C" & Variable frequency drives is for the ventilation of a Gas Turbine compartment.



Design 6105 Size 4412 Arrangement 9H 80% Width ID Fan used for hot air recirculation at a speciality fluorochemicals plant in India.



Design 2300 Size 2700 Arrangement 4 Pressure Air Fans for a Dilution Air application in Ohio.

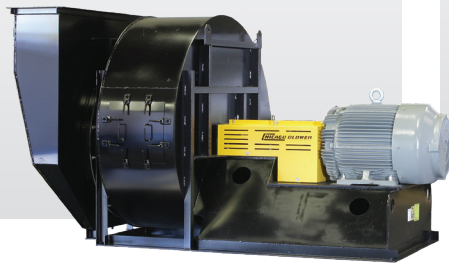
PRE-ENGINEERED FANS

Packaged Forced Draft

- Compact and direct connected
- Pre-engineered, completely assembled, factory tested, and ready to run
- Seven standard discharge positions can be specified for each rotation
- Designed for higher pressure supply air applications, such as packaged boilers
- Steep, stable pressure curve allows near constant air delivery
- Three wheel designs for all standard motor speeds offer a broad performance range
- Available as Arrangement 4 or 8, depending on the airstream temperature and application

Sizes: 2000 to 5414
Volumes to 120,000 CFM
Pressures to 58" wg

Request Bulletin PFD



Industrial Radial Tip

- Designed specifically for demanding heavy-duty applications
- Combines the advantages of the radial and backward inclined blades
- Replaces the traditional light-duty exhauster with a more rugged, longer life fan
- Ideal for induced draft, industrial dust collection, and most harsh airstreams
- Available in belt drive Arrangement 1 & 9 configurations plus direct drive Arrangement 8

Sizes: 3000 to 6000
Volumes to 160,000 CFM
Pressures to 33" wg

Request Bulletin IRT



Industrial Airfoil Fans

- Consistently high quality, rugged heavy duty construction and excellent efficiencies
- Reliable, long term performance
- High efficiency airfoil wheel combined with belt drive flexibility
- Ideal for high pressure applications, such as combustion air, product cooling, drying, supply air and liquid agitation
- Optional single surface backward curved wheel for light dust loads
- Fan features heavy duty roller bearings and shaft, rugged base mount
- Available in Arrangements 1 & 9 belt drive; Arrangement 8 direct drive

Sizes: 2700 to 6600
Volumes to 170,000 CFM
Pressures to 40" wg

Request Bulletin IAF



Arrangement 8 Industrial Airfoil Fan with size 6105 wheel, insulation studs, and inlet vane damper for hot air application over 400°



Design 1904 PFD size 2214 for a Grain Drying application



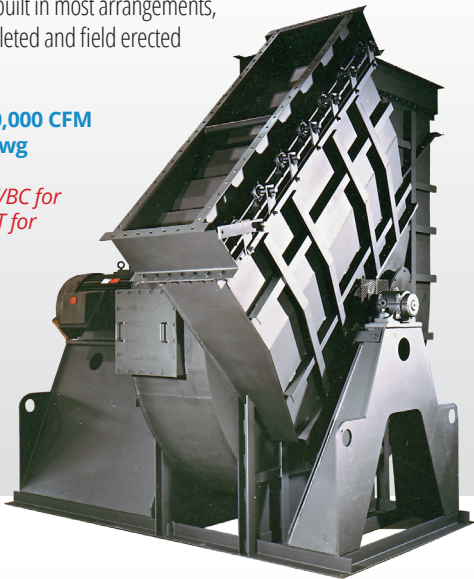
CUSTOM FANS

Mechanical Draft Fans

- Wide selection of airfoil, backward curved and radial tip wheel designs available for forced and induced draft applications
- Designed for handling dusty, dirty airstreams while providing excellent operating efficiencies
- Typical installations include incinerators, baghouses, kilns, furnaces as well as other custom processes
- Fans are custom built in most arrangements, fully factory completed and field erected

Wheels to 146"
Volumes to 1,000,000 CFM
Pressures to 70" wg

*Request Bulletin AF/BC for
Airfoil or Bulletin RT for
Radial Tip*

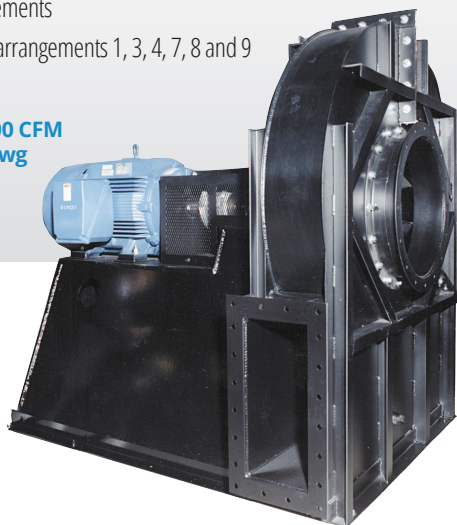


Pressure Air Fans

- Versatile fan designed for many diverse applications
- Clean air applications include combustion air, air drying, primary air ejectors, and product cooling
- Ideal for corrosive exhaust, air pollution systems and chemical processing
- Recommended for pollution control applications, such as continuous duty of primary air on burners, pulverizers, fluidizers and scrubbers
- Designed to meet specific customer performance and mechanical requirements
- Available in AMCA arrangements 1, 3, 4, 7, 8 and 9

Wheels to 150"
Volumes to 440,000 CFM
Pressures to 108" wg

Request Bulletin PA



Airfoil Arrangement 7S1 Fan, SWSI with Dual Drive for Refinery



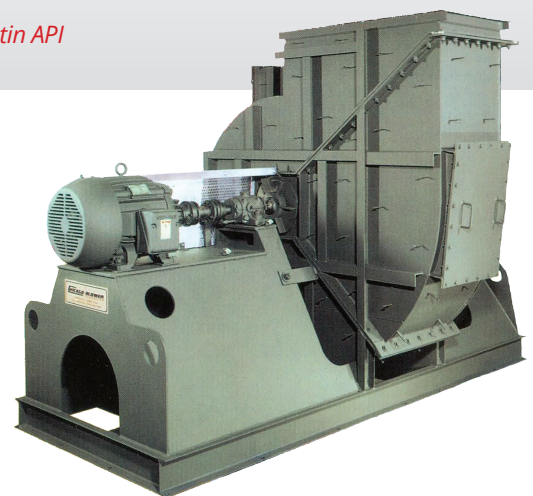
Three Design 5800 Size 6000 Arrangement 8S Fans for Combustion Air



API Fans

- One of a handful of manufacturers qualified in building fans for the petroleum and chemical industries
- AWS Certified code welding done entirely in house
- All custom fans available with API 673 and 560 construction features that meet the stringent demands of the petroleum industry
- Each fan is individually engineered using one of 20 distinct designs that fulfill performance specifications and the unique demands of the installation

Request Bulletin API



INDUSTRIAL DAMPERS

Chicago Blower manufactures stack and fan dampers for most applications. Dampers included are pre-engineered Inlet Volume Controls (IVC), plus custom Outlet Dampers, Butterfly Dampers and Inlet Box Louvre Dampers, both the Pre-Spin and Opposed Blade types.

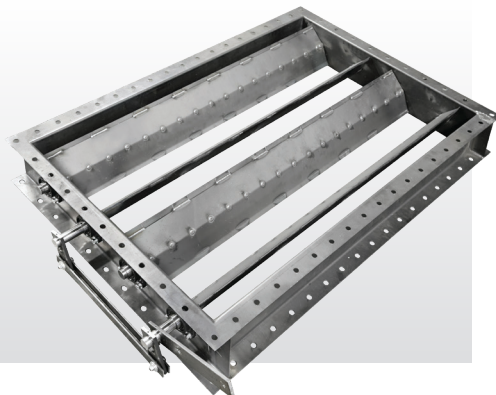
Inlet Volume Controls (IVC)

- Device designed by Chicago Blower to alter fan performance
- Closing the IVC spins inlet air in the direction of the wheel rotation and reduces the flow and pressure as it moves down the system curve, keeping the fan in a stable operating condition
- Standard IVCs suitable for applications to 200°F
- Optional low leakage IVCs have tighter clearances resulting in additional turn down capabilities



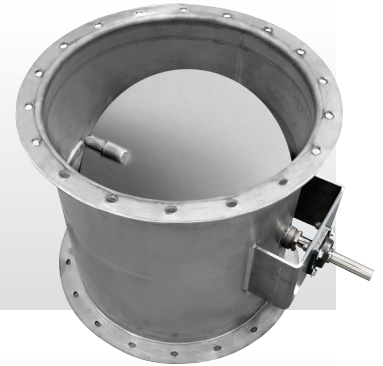
Custom Outlet Dampers

- Outlet dampers assist in achieving greater turndown when combined with an IVC or inlet damper
- Damper has double surfaced blades welded to full length axles



Butterfly Dampers

- Used for control and isolation of various gases in round ducts
- Can be made to match standard or ANSI flanges ranging from 12" to 48" openings



Inlet Box Louvre Dampers: Pre-Spin and Opposed Blade

Both types of inlet box dampers differ from the IVC in that the bearings are outside the airstream, allowing for higher temperatures and dust laden applications.

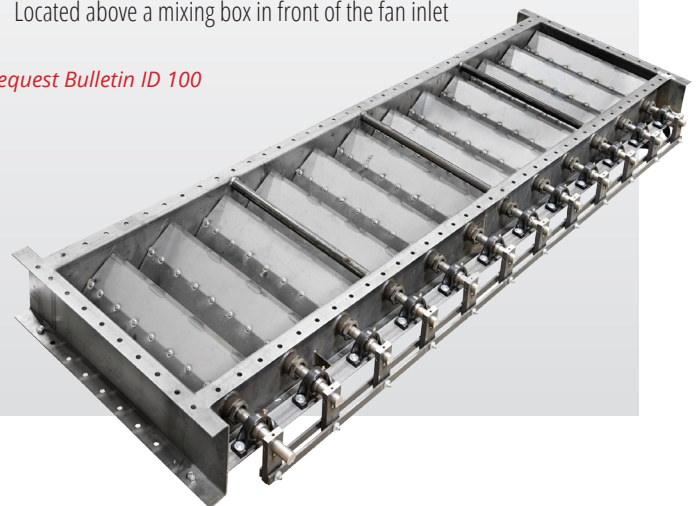
Pre-Spin Inlet Box Dampers

- Alter fan performance by moving down the system curve
- Double surfaced blades welded to full length axles and operate parallel to each other to pre-spin the air

Opposed Bladed Inlet Damper

- Blades provide a straight flow of air towards the fan
- Typically used in boiler applications
- Located above a mixing box in front of the fan inlet

Request Bulletin ID 100

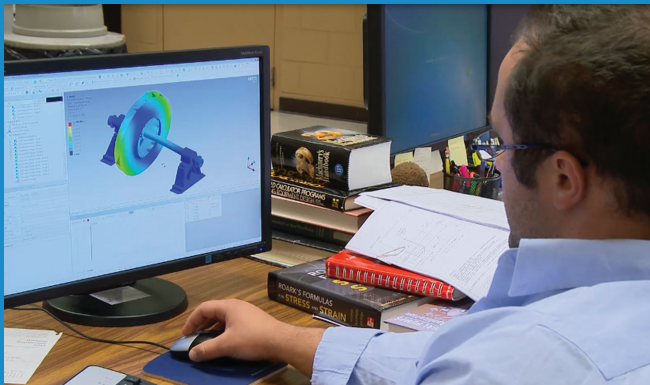


Engineering Services

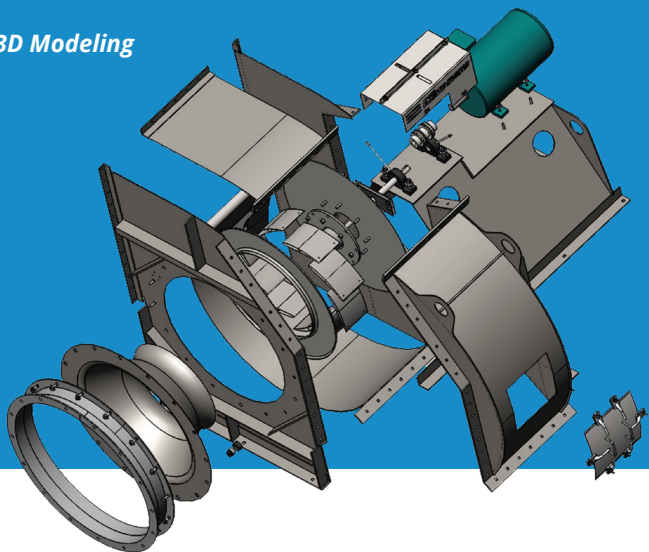
With FEA Analysis, and 3D modeling, we continue to be one step ahead of the competition by designing our products with innovative and energy efficient concepts. Our vast experience and reliable engineering performance have allowed us to utilize the latest technology and provide you with leading industrial products.

- Finite Element Analysis (FEA)
- Torsional Analysis
- Bearing Analysis
- Modal Analysis
- 3D Modeling

Finite Element Analysis (FEA)



3D Modeling



Testing Services

- Mechanical Run Tests
- AMCA Performance Testing
- Non-Destructive Testing
- Rotor Balancing

AMCA Performance Test

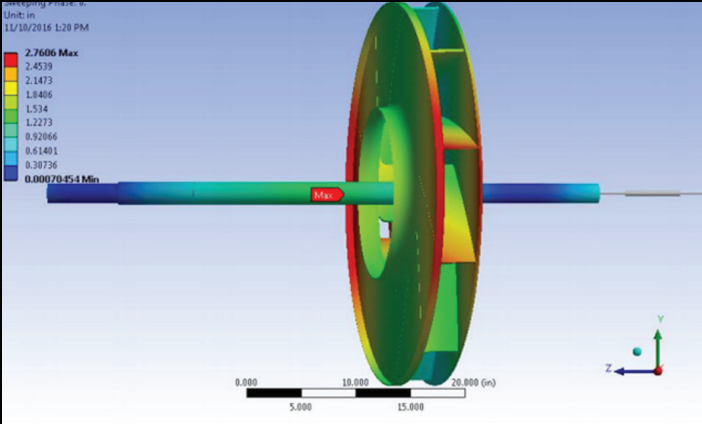


Mechanical Run Test



Non Destructive Testing - Magnetic Particle Examination





SETTING THE STANDARD FOR QUALITY

Innovative Engineering through Application Analysis

Chicago Blower Fans are also available worldwide:

- Argentina
- Australia
- Azerbaijan
- Belarus
- Belgium
- Brazil
- China
- Colombia
- Estonia
- Georgia
- India
- Indonesia
- Israel
- Italy
- Kazakhstan
- Korea
- Kyrgyzstan
- Latvia
- Lithuania
- Luxembourg
- Mexico
- Mozambique
- Netherland
- New Zealand
- Norway
- Russia
- Saudi Arabia
- Singapore
- South Africa
- Spain
- Sweden
- Taiwan
- Tajikistan
- Thailand
- Turkey
- Ukraine
- Uzbekistan
- Venezuela
- Zambia
- Zimbabwe



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